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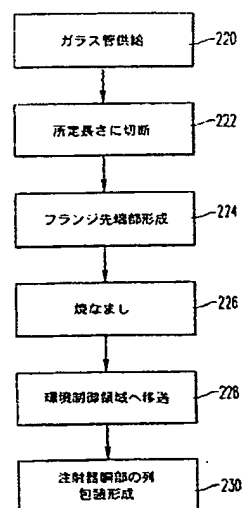
(71) 出願人 ベクトン・ディキンソン・アンド・カンパニー
BECTON, DICKINSON AND COMPANY
アメリカ合衆国 ニュー・ジャージー
07417-1880 フランクリン・レイクス
ベクトン・ドライブ 1
(72) 発明者 オデル ロバート
アメリカ合衆国 07417 ニュージャージー
州 フランクリン レイクス プリス
アベニュー 357
(74) 代理人 弁理士 谷 義一 (外2名)

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(54) 【発明の名称】 医療容器の製造、充填および包装方法

(57) 【要約】

医療容器の如きガラスの医療装置は、製造され、そして低細菌性負荷を有する清浄な装置を生じさせるオープン内で加熱により焼きなまされる。プラスチックの医療装置および医療容器は、清浄な装置を生じさせるプラスチック成形装置により形成される。清浄な装置は清浄な作業領域を維持すべく制御された環境内に直ちに移送される。作業領域は、ルーム全体内の清浄レベルを維持する必要性を避けるべくクリーンルームまたは局所的な領域であってもよい。注射器先端部閉鎖体がハウジング組立体内に導入され得、そこで注射器胴部および先端部閉鎖体は、濾過されイオン化された空気で洗浄され、先端部閉鎖体は胴部に結合される。注射器胴部すなわち医療容器は物質で充填され、閉鎖部材が取り付けられてもよい。



DOCUMENT 1/1
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JAPANESE [JP,2002-505980,A]

CLAIMS DETAILED DESCRIPTION
TECHNICAL FIELD DRAWINGS

[Translation done.]

1. JP,2002-505980,A

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CLAIMS

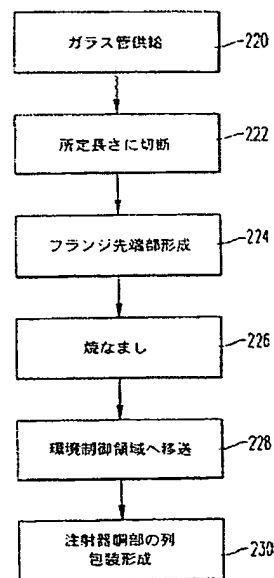
[Claim(s)]

[Claim 1]it is the method of producing a container -- a container is formed in a forming device -- a method containing a step which transports said container to a field controlled environmentally that a predetermined pure level should be maintained, and washes said container.

[Claim 2]A method of Claim 1 which surrounds said container in the second container and is characterized by sterilizing said container.

Drawing selection

Representative drawing



[Translation done.]

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CLAIMS

[Claim(s)]

[Claim 1]it is the method of producing a container -- a container is formed in a forming device -- a method containing a step which transports said container to a field controlled environmentally that a predetermined pure level should be maintained, and washes said container.

[Claim 2]A method of Claim 1 which surrounds said container in the second container and is characterized by sterilizing said container.

[Claim 3]A method of Claim 1 which said container is formed with glass, and said method forms said container with a glass formulation device, and is characterized by including heating said container to annealing temperature that said container should be annealed simultaneously and should be defecated in order to form said container.

[Claim 4]A method of Claim 1 which fills up with a substance of a request of said container, and is characterized by including combining a closure member with said container that said container should be closed.

[Claim 5]A method of Claim 1 including enclosing in a field controlled locally that said forming device should be maintained on a predetermined pure level.

[Claim 6]A method of Claim 1 which said container is an injector drum section and is characterized by forming said injector drum section from glass or a plastic.

[Claim 7]A method of Claim 6 which gives a tip part cap that the first end of said injector drum section should be closed, and fills up said injector drum section with a substance, and is characterized by including a step which gives a stopper to the second end of said injector drum section that an injector with which it filled up beforehand should be formed.

[Claim 8]A method of Claim 6 containing a step which turns filtered airstream in said field controlled environmentally at said injector drum section that said injector drum section should be washed.

[Claim 9]A method of Claim 8, wherein said airstream contains ionized air.

[Claim 10]A method of Claim 1 which said container is an injector drum section of glass, and is characterized by including that said method forms said injector drum section by heating a glass tube in

temperature of about 760 to 1100 **.

[Claim 11]A method of Claim 10 including annealing said injector drum section at temperature of at least about 560 **.

[Claim 12]A method of Claim 1, wherein said field controlled environmentally maintains a pure level of the abbreviation class 100.

[Claim 13]A method of Claim 1 filtering air which said field controlled environmentally is provided with at least one housing assembly which has the HEPA filter connected with an air blower and said air blower, and goes into said at least one housing assembly.

[Claim 14]A method of Claim 13, wherein said at least one housing assembly is maintained by positive internal pressure that air which is not filtered by said housing assembly should be prevented from entering.

[Claim 15]A method of Claim 6 including giving a tunic of lubricant to an internal surface of said injector drum section.

[Claim 16]A method of Claim 10 which said formation step heats the first end of a glass tube to temperature said glass tube becomes easy to bend, and is characterized by including shape attachment ***** for said first end that a flange which extends in a method of the outside of a radial direction mostly from a medial axis of said glass tube should be formed.

[Claim 17]A method of Claim 16 which heats the second end of a glass tube to temperature in the state of being easy to bend said glass tube, and is characterized by including shape attachment ***** so that a cannula needle may be accepted for said second end.

[Claim 18]A method of Claim 1 including filling up said medical care container with a substance.

[Claim 19]It is the method of producing an injector drum section assembly of glass with which it filled up beforehand, In a glass formulation device formed in an injector drum section which has the second open end that discharges contents from the first open end and injector drum section that receive an injector plunger for a tubed glass tube, forming two or more pure injector drum sections, and annealing an injector drum section of said glass at temperature of at least 500 ** -- and -- A method by which a step transported promptly being included in at least one housing assembly so that a predetermined pure level may be maintained for said injector drum section.

[Claim 20]At least one injector component parts are combined with said injector drum section that two or more injector drum section assemblies should be formed, a sequence of an injector drum section assembly is formed in said at least one housing assembly -- placing said sequence into a container -- and -- A method of Claim 19 including closing said container that said injector drum section assembly should be formed.

[Claim 21]Said formation step supplies a tubed glass tube to said forming device, and the first end of a glass tube, A method of Claim 20 which heats to temperature which heats to temperature said glass tube becomes easy to bend, and forms a flange in said first end side and, to which said glass tube tends to bend the second end of said glass tube, and is characterized by including forming a tip part in said second end.

[Claim 22]A method of Claim 21, wherein said first of said glass tube and the second end are heated by temperature of about 760 to 1100 **.

[Claim 23]A method of Claim 21 including annealing said injector drum section by heating in temperature of at least about 560 **.

[Claim 24]A method of Claim 20 containing a step which washes said injector drum section in said at least one housing assembly before forming said sequence.

[Claim 25]A method of Claim 24 including turning to said injector drum section airstream which said washing step was filtered and was ionized, and removing particles from the surface.

[Claim 26]A method of Claim 20, wherein said at least one housing assembly contains an HEPA filter connected with an air blower and said air blower that air included in said housing assembly should be filtered, and a pure level of the abbreviation class 100 should be maintained.

[Claim 27]A method of Claim 19, wherein said at least one housing assembly is maintained by positive internal pressure that air which is not filtered by said housing assembly should be prevented from entering.

[Claim 28]A method of Claim 20 which transports said injector drum section to the second housing assembly, and is characterized by including giving a tunic of lubricant to an internal surface of said injector drum section before forming said sequence.

[Claim 29]A method of Claim 28 which transports said injector drum section to the third housing assembly, and is characterized by including packing while being in said third housing assembly about said injector drum section.

[Claim 30]A method of Claim 19, wherein said forming device is enclosed by housing assembly so that a predetermined pure level may be maintained.

[Claim 31]A method of Claim 30, wherein said housing assembly surrounding said forming device maintains a pure level of the abbreviation class 100.

[Claim 32]A method of Claim 19, wherein said injector drum section is promptly transported to said at least one housing assembly after formation that a predetermined pure standard should be maintained.

[Claim 33]it is the method of producing an injector with which it filled up -- the outlet nozzle owner of the truncated cone shape in a tubed side attachment wall, the end face side acceptance end which carries out an opening, and an end piece is carried out. an injector drum section of a plastic is formed in an injection molding machine -- said injector drum section, It transports without additional washing or sterilization to a field environmentally controlled in order to maintain a predetermined pure level, Remove particles for filtered airstream from the surface of an injector drum section, and it turns to said injector drum section in said field controlled environmentally that said injector drum section should be washed, a tip part cap is delivered to said field controlled environmentally -- air scouring of said tip part cap being carried out, and in said field controlled environmentally, Said tip part cap is included in said outlet nozzle of said injector drum section that said outlet nozzle should be closed, said injector drum section is filled up with a substance through the base end which carries out an opening -- a stopper to a field controlled environmentally, [deliver and] inserting in said base end of said drum section which carries out an opening that an injector into which said stopper was pre-filled should be formed -- and -- A method containing a step which removes a pre-filled injector from said field controlled environmentally.

[Claim 34]it is the method of producing an injector with which it filled up -- the outlet nozzle owner of the truncated cone shape in a tubed side attachment wall, the end face side acceptance end which carries out an opening, and an end piece is carried out. an injector drum section of a plastic is formed in an injection molding machine -- said injector drum section, It transports without additional washing or sterilization to a field environmentally controlled in order to maintain a predetermined pure level, Remove particles for filtered airstream from the surface of an injector drum section, and it turns to said injector drum section in said field controlled environmentally that said injector drum section should be washed, a stopper is delivered to said field controlled environmentally -- it inserting in said base end of said injector drum section which carries out an opening, and said stopper that said base end should be closed, said injector drum section is filled up with a substance through the outlet nozzle -- a tip part cap to said field controlled environmentally, [deliver and] In said field controlled environmentally, air scouring of said tip part cap is carried out, including in said outlet nozzle of said injector drum section that an injector of pre-filling of said tip part cap should be formed -- and -
- A method containing a step which removes a pre-filled injector from said field controlled environmentally.

[Claim 35]Claim 33 containing a step which packs said pre-filled injector or 34 methods.

[Claim 36]Claim 33 containing a step which sterilizes said pre-filled injector, a method of 34 or 35.

[Claim 37]Claim 33 containing a step which sterilizes said pre-filled injector which is taken over to a step which packs said pre-filled injector or 34 methods.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

(Technical field)

This invention manufactures drugs delivery like injector component parts, and a drug container device, and generally relates to the clean method of packing component parts in a non-particle field substantially. In more detail, this invention manufactures the injector drum section of glass or a plastic, and is turned to the method of assembling and packing this injector drum section within a clean room or the environment by which it was clean and non-anemophily particles were controlled locally substantially.

[0002]

(The background of an invention)

A drugs delivery system is prepared by fabricating or forming various component parts, and generally, assembling these component parts. Typically, an assembly process and other treating operation produce the device which must be washed later that the particles adhering to the surface should be removed, in order to fulfill the pure standard for drugs delivery systems. A drugs delivery system is packed and sterilized after washing.

[0003]

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TECHNICAL FIELD

(Technical field)

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[0002]

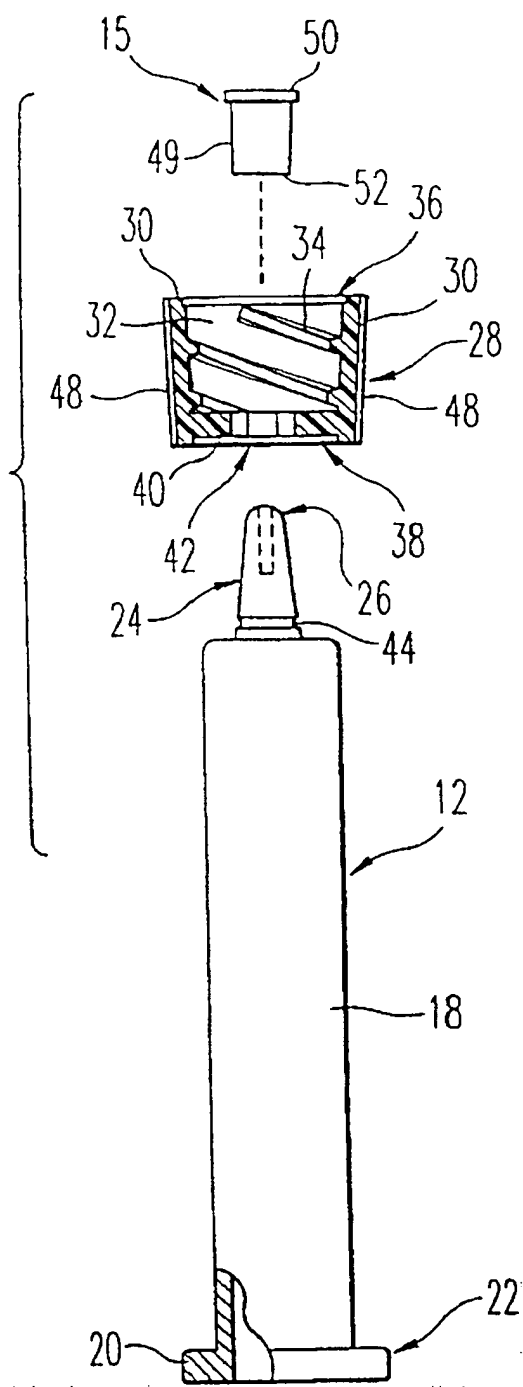
(The background of an invention)

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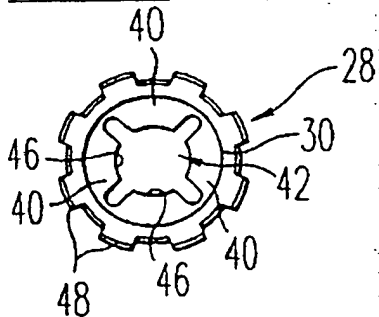
[0003]

The injector is classified into some general form. The first form is assembled and is put in by the sterilization package which may be conveyed with the medicine bottle and ampul of drugs or the solution in which other injection is possible. Generally the medicine bottle and the ampul are made from the glass which does not interfere in the stability of drugs during prolonged preservation, or other clear materials. An injector is filled up with drugs or other solutions at the time of use, and a patient is injected. Another form of the injector is packed with the medicine bottle in which it filled up with the powder or the freeze-dried drugs dissolved with water or other suitable solvents, before filling up an injector.

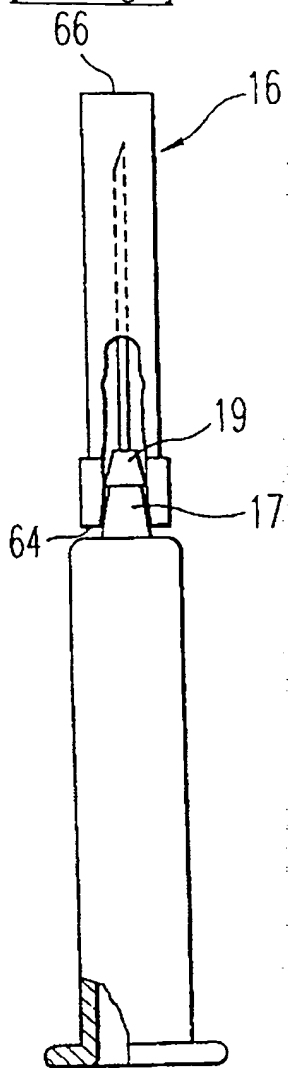
[0004]



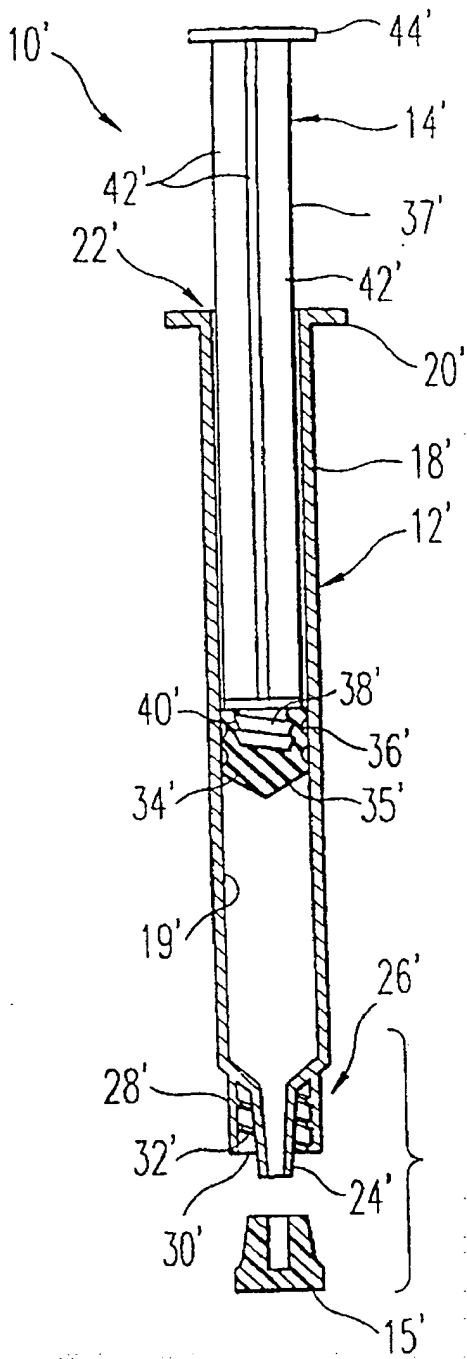
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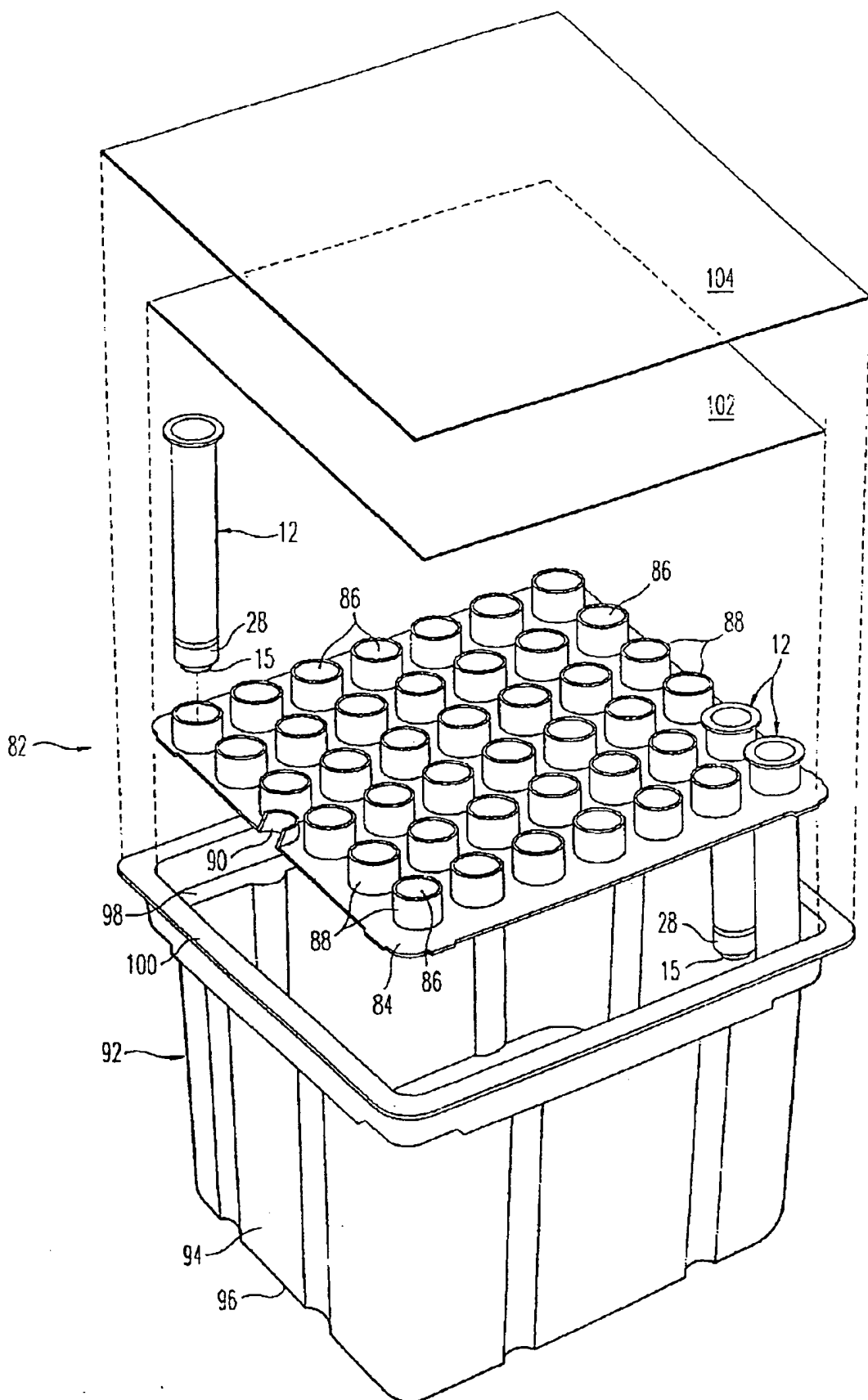
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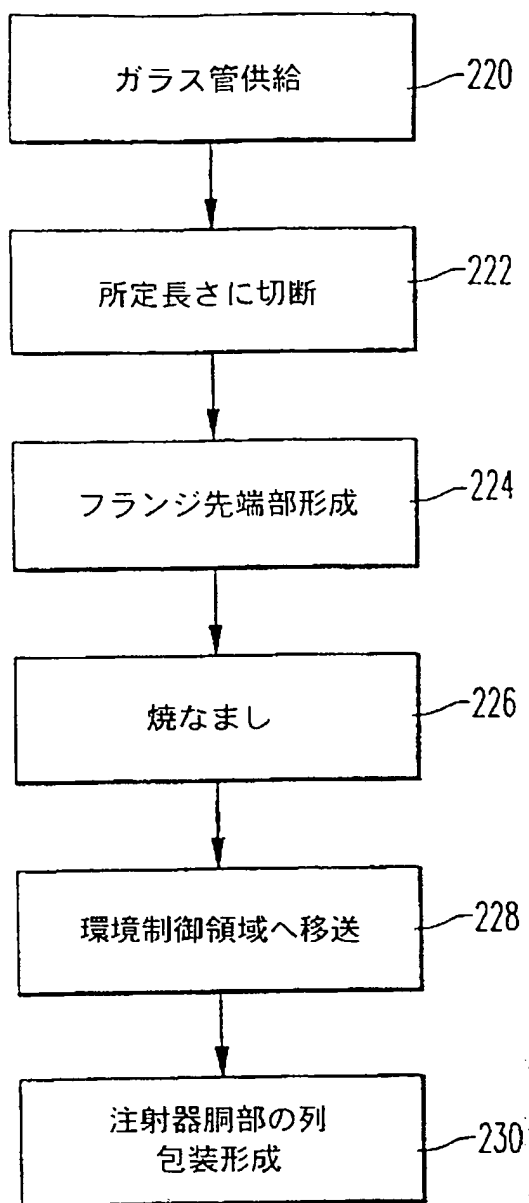
[Drawing 4]



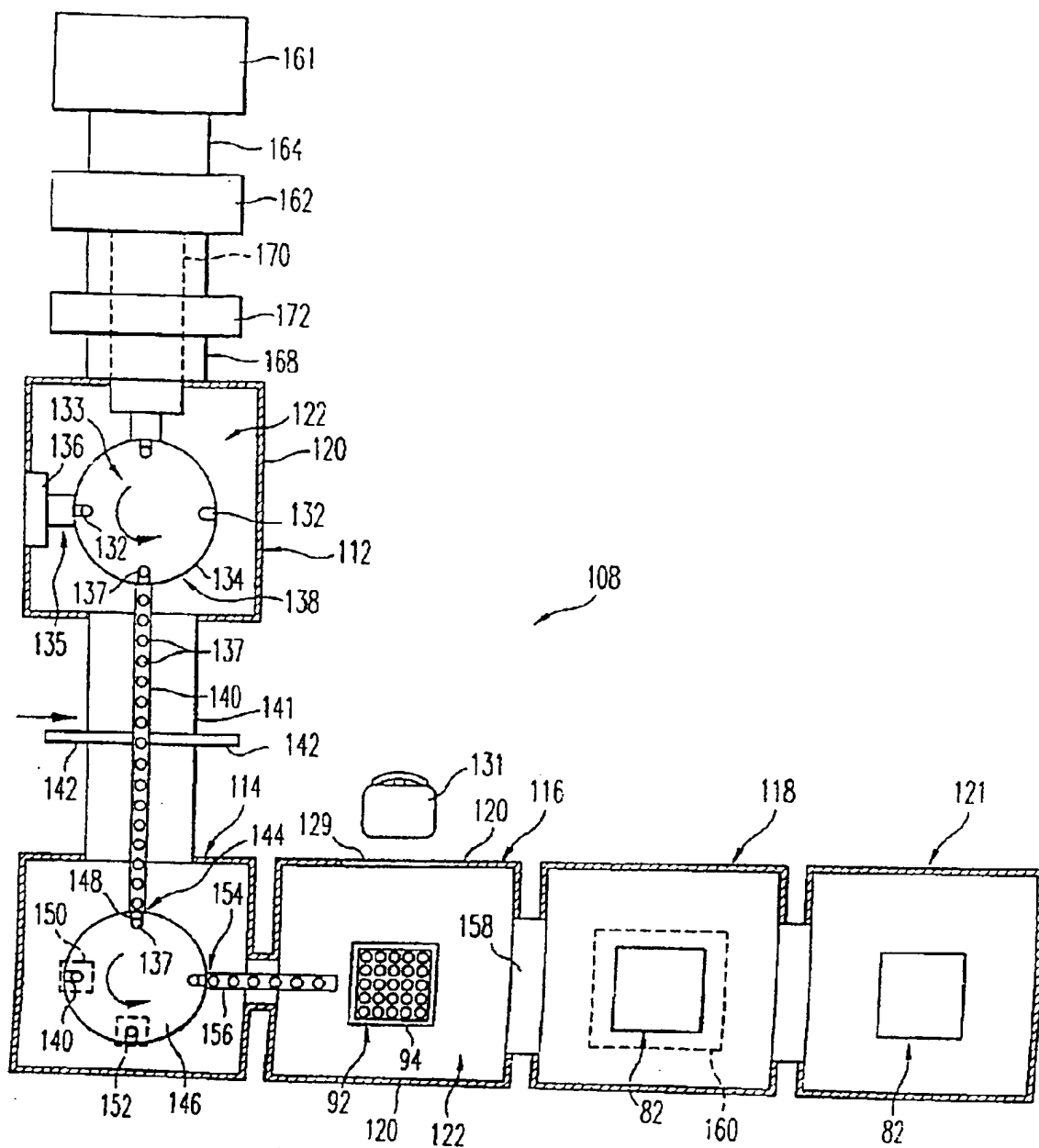
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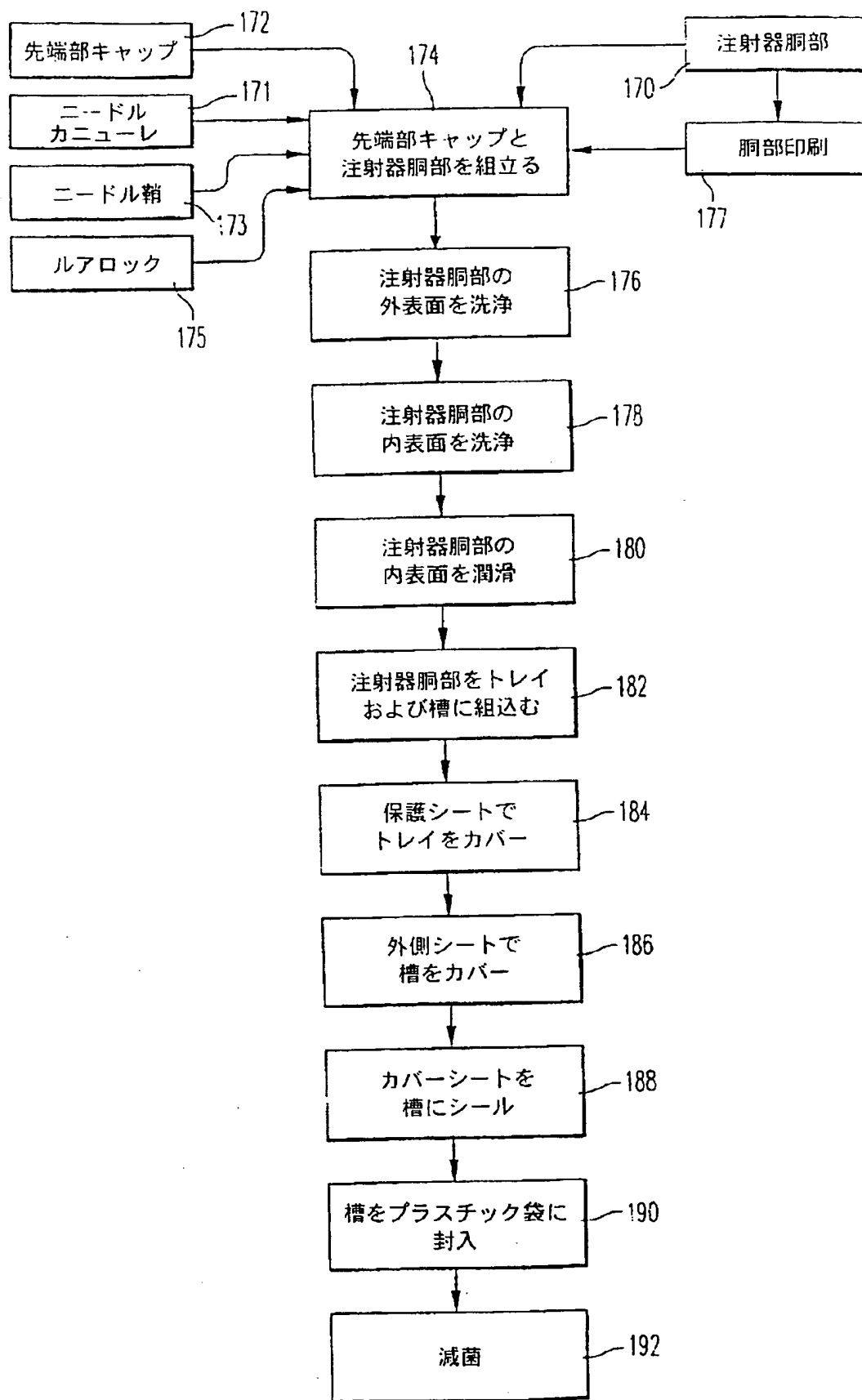
[Drawing 6]



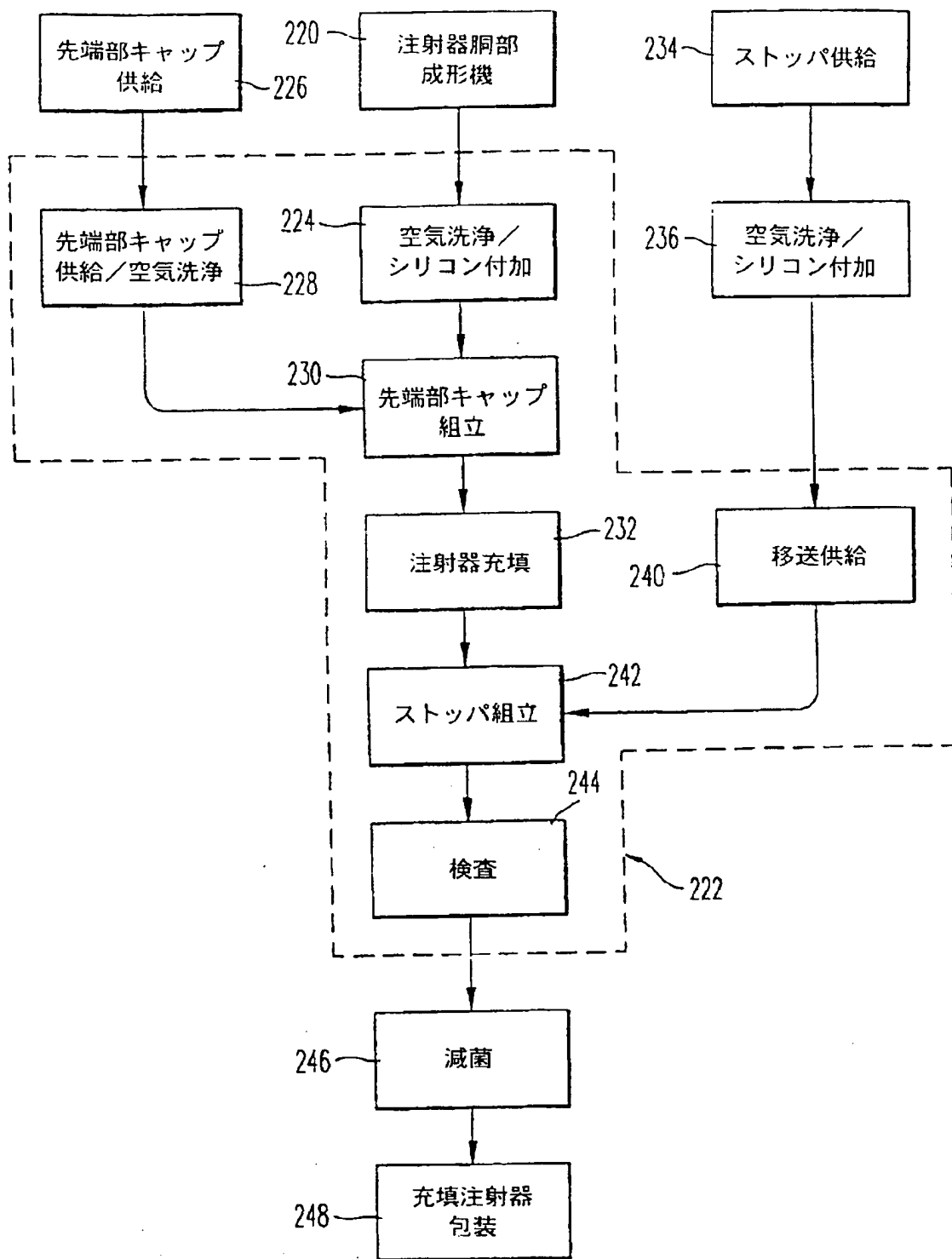
[Drawing 7]



[Drawing 8]



[Drawing 10]



[Drawing 11]

